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FORESTRY MANUAL FOR 4-H CLUB MEMBERS
INTRODUCTORY UNIT

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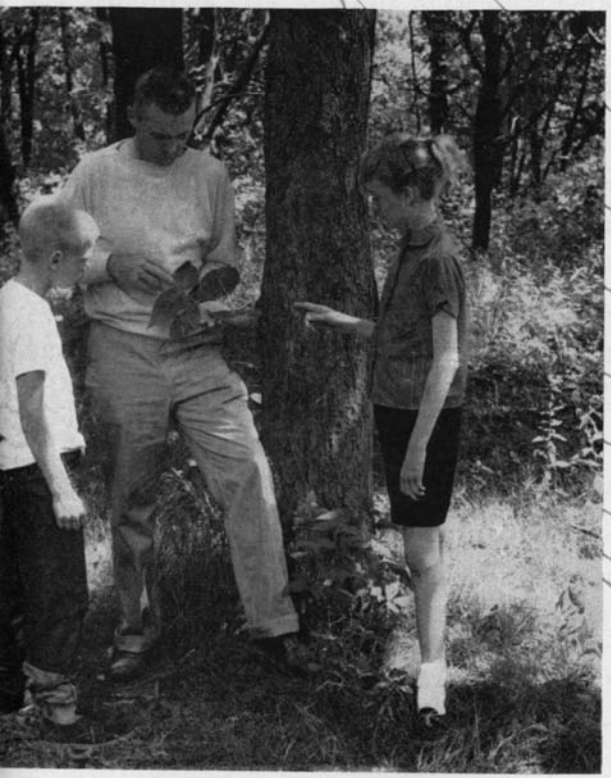
LET'S KNOW OUR TREES AND WOODS

BY W. F. BULKLEY



UNIVERSITY OF ILLINOIS COLLEGE OF AGRICULTURE
EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
CIRCULAR 825

This manual belongs to

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This manual is the first of a series of publications devoted to 4-H activities in forestry. In this introductory unit you will learn to know the trees and woods commonly found in your community or in other sections of Illinois. This knowledge will be very helpful when you plant trees, care for them, and use their products in other more advanced units.

The material in this manual was prepared by W. F. Bulkley, associate extension forester, University of Illinois. Valuable suggestions were given by L. B. Culver, extension forester, R. E. Nelson, associate extension forester, University of Illinois Dixon Springs Experiment Station, and by G. W. Stone, state 4-H staff, University of Illinois.

The photograph on the cover was taken at 4-H Camp Shaubena in Knox County near Galesburg. The two 4-H club members are learning to identify a shagbark hickory with the help of their counselor.

Urbana, Illinois December, 1960

Cooperative Extension Work in Agriculture and Home Economics: University of Illinois, College of Agriculture, and the United States Department of Agriculture cooperating. Louis B. Howard, *Director*. Acts approved by Congress May 8 and June 30, 1914.

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Schedule for Completing the Unit

WHAT TO DO	WHEN TO DO IT
First — Enroll with your 4-H Club leader.	September through May — **before June 1.**
Second — Learn to know at least 20 trees (either forest or shade trees).	**September through August.**
Third — Exhibit leaves and twigs of at least 10 forest or shade trees.	Collect and store twigs from **November through March.** Collect and store leaves from **May through June.**
To improve the quality of your collection, add fruit to it.	Collect and store fruit (seed): Spring-ripening kinds — **May through June** Summer-ripening kinds — **July and August** Fall-ripening kinds — **August through October.** You may have to collect fall-ripening kinds earlier to complete your exhibit before fair-time, or by the time your leader asks for completion forms to be filled out.
Fourth — Enter your wood exhibit of 10 samples of forest trees in county contest to compete for county winner.	Collect wood samples from **September through June.** Mount them and exhibit in **July or August.**
Fifth — Submit your completed record book to your 4-H Club leader. It will be considered in the forestry achievement awards program.	**Before September 1**

(continued on next page)

ADDITIONAL ACTIVITIES

Accompany your club or county group on a tour to an arboretum (place where unusual kinds of trees are grown for exhibition and scientific purposes).

With your club or group, visit a large park, state forest, or national forest in Illinois to learn about native trees and trees brought from other regions, states, and countries.

May through September

Suitable places for these tours include the following:

Northeastern Illinois — Morton Arboretum, Lisle
Northwestern Illinois — Henderson State Forest, Oquawka
North Central Illinois — Sinnissippi Forest, Oregon
West Central Illinois — Mason State Forest, Forest City
East Central Illinois — Allerton Park, Monticello
Southwestern Illinois — Shawnee National Forest, Jonesboro
Union State Forest, Jonesboro
Southeastern Illinois — Shawnee National Forest,
Vienna and Elizabethtown

CONTENTS

YOU COME INTO CONTACT WITH TREES OR THEIR PRODUCTS EVERY day of your life. Whether you live in town or on the farm, shade trees provide shade for you — and on a hot day a little shade can mean a great deal. The wood from trees grown on Illinois farms is used in making many useful articles. Certain kinds of trees are used at Christmas-time in your home. You pay a small price for the pleasure your Christmas tree gives you each year.

Someday you will want to plant a shade tree, Christmas trees, a windbreak, or a forest plantation. Then you will discover that what you have learned in this unit will be very helpful. By following the suggestions in the manual, you will be able to identify the common trees and know which ones you will need for certain plantings. It is easy to learn to identify at least 20 of our native trees by their leaves in summer and by their twigs, bark, or buds in winter.

HOW TO START THIS UNIT

If you are 10 years old or older, you can probably identify a few trees just by having seen them or by having had someone point them out to you. Read over the list of trees on page 20. Check the ones you already know. Then look in a park, woodland, fence row, or down a tree-lined street for other trees. There are three ways you can identify unknown trees:

1. Compare the leaves, twigs, flowers, or seed of the tree you want to identify with the illustrations in "Forest Trees of Illinois — How to Know Them."

2. Use the keys found on pages 24 to 27 of this manual. A summer key is especially useful when the tree still has its leaves.

3. Ask your parents, 4-H leader, or teacher to help you.

As you look at the parts of a tree — the leaves, twigs, buds, or bark — pick out the important characteristics or "earmarks." Once you have learned the earmarks for a particular tree, you can always identify that tree. You will find a list of these characteristics for 25 common Illinois trees on pages 22 and 23.

To show you how this list works, let's suppose that you found a tree with compound leaves — one with 13 or more leaflets that drop from the twig in the fall. When cut lengthwise, the twig has a honeycombed or chambered pith in the center. The inner bark is lemon-colored and the outer bark is chocolate-colored. The seed is a nut. Only one tree in the list fits this description. It is the black walnut, the tree that furnishes the squirrels and all of us with delicious nuts.

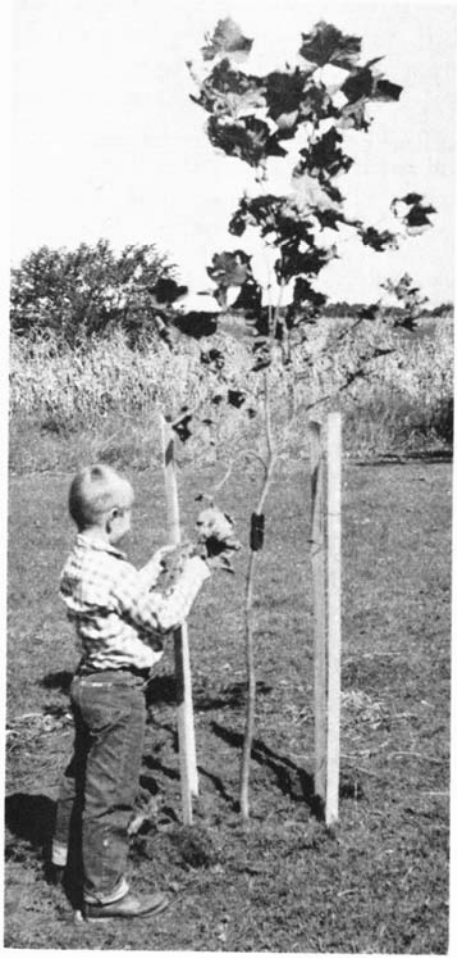
This boy and girl are decorating a tree that is commonly used as a Christmas tree in Illinois. Do you know what kind of tree it is?

You have probably noticed that nearly all of our native trees drop their leaves in the fall. These are called *deciduous* trees or *hardwoods*. But several kinds of trees do not lose their leaves in the fall. They are known as evergreens, and are planted as windbreaks or forests. Since most evergreens bear cones, they are also known as *coniferous* or "cone-bearing" trees.

Unlike the hardwoods, most coniferous trees — pine, spruce, etc. — do not grow wild. Red cedar is one exception. It can be found throughout the state. Remember — you can include coniferous trees in the list of 20 trees that you will check as trees you know. If you take

this unit for the second year, at least half of the trees in your list will be conifers.

Always look for more than one way to recognize a tree. If you can identify deciduous trees only by their leaves, you may have trouble in telling one tree from another in the winter. If you can't identify a tree from its bark alone, then looks at its buds, twigs, shape, and branching habits. Notice whether its branches — and the twigs on the branches — are arranged oppositely or alternately on the trunk. Search for fruit (seed, acorns, nuts). Be a tree detective — examine all clues that will enable you to give the tree a name.



As a 4-H forester, you will learn the kinds of trees that are most suitable for use as shade trees, Christmas trees, windbreaks, or wood crops. This boy has planted a sycamore for shade because he has learned that it is a strong, beautiful, fast-growing tree.

COLLECTING SPECIMENS

Although you are required to exhibit your specimens in this project, there is an even more important reason for collecting them. As you collect, examine, and mount your leaves, fruit, flowers, buds, and twigs, you will learn the differences between several kinds of forest trees. The shapes of leaves and buds, the color and type of fruit (seed), and the odors of crushed leaves and twigs will stand out in your memory.

Leaves

Collect at least 3 leaves from each tree. Get a complete leaf from trees that have compound leaves, such as black walnut and hickory. Compound leaves have three or more leaflets. (See opposite page for differences between simple and compound leaves.)

The only equipment you need is a magazine for holding your samples. Write the name of the tree on the page where you insert the leaf specimen. Your collection will receive a higher rating if you select leaves without holes, ragged edges, or yellow or brown spots. You can usually find the most perfect leaves early in the season, just after they have reached full size.

Twigs

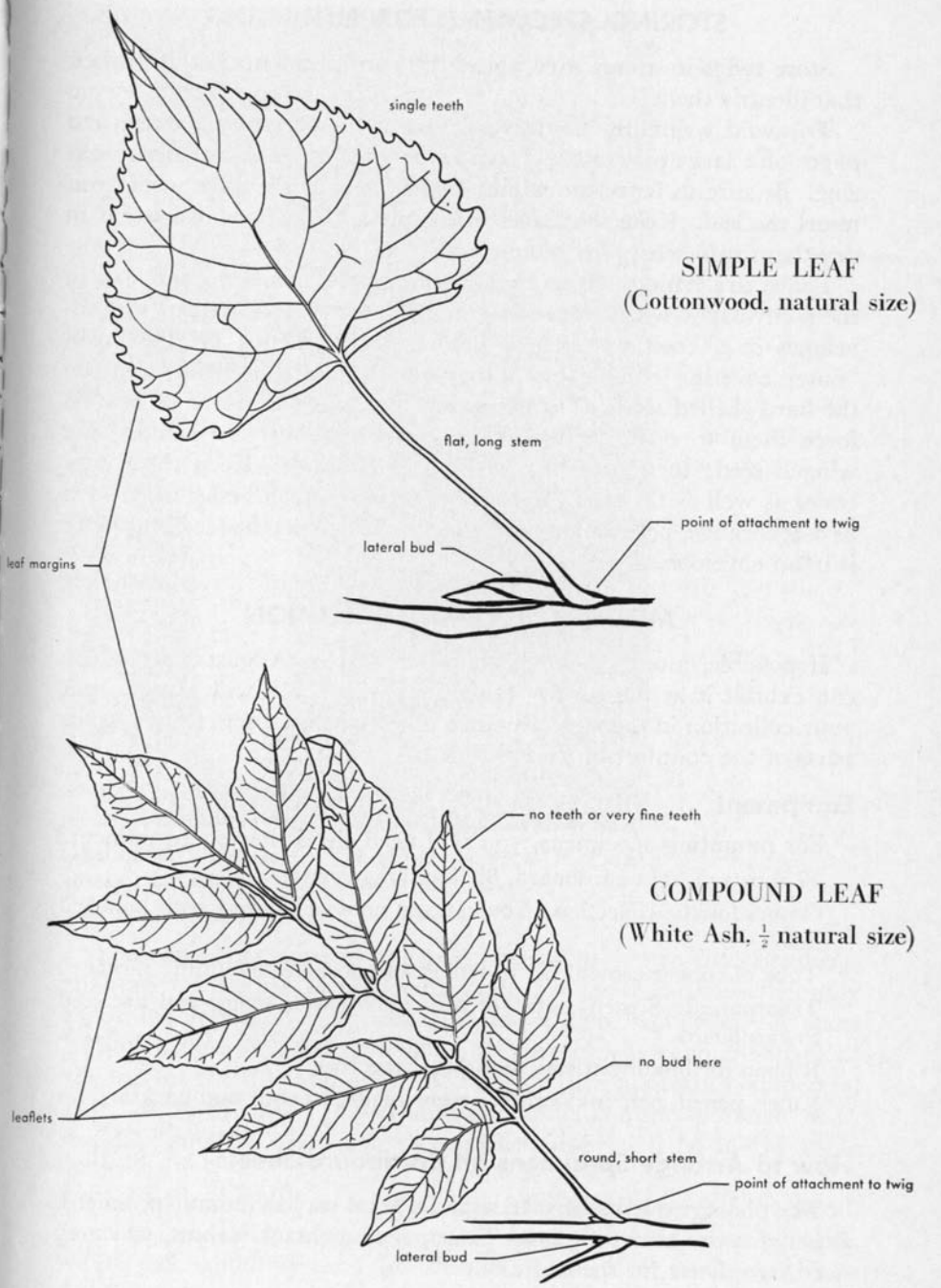
You will need a sharp knife, razor blade, or pruning shears to cut the twigs, tags for labeling 10 twigs, and a large envelope or sack in which to put them.

Select live twigs from a branch. Be sure that the winter buds are fully developed. Collect your twigs either before the buds begin to swell or open in the spring or after the new buds have formed in the fall. Cut a section from the end of the twig about 8 inches long. Tie a tag on each twig showing the name of the tree from which the twig was taken.

Fruit

You will need 10 envelopes for carrying the fruit (seed), and a cardboard box or fruit jars for nuts, acorns, and larger fruit. Most tree fruit ripens in the fall, and August is the last month in which you should collect it. If you want to complete your collection in time to exhibit it on achievement day, you should collect the fruit in July, even though it may not be ripe then. Seal each fruit in an envelope and write the name of the tree on the outside of the envelope.

The guide on page 21 will tell you the flowering period for each tree and the months in which to collect fruit.


single teeth
SIMPLE LEAF
(Cottonwood, natural size)
flat, long stem
point of attachment to twig
lateral bud
leaf margins
no teeth or very fine teeth
COMPOUND LEAF
(White Ash, $\frac{1}{2}$ natural size)
no bud here
leaflets
round, short stem
point of attachment to twig
lateral bud

STORING SPECIMENS FOR MOUNTING

Store **twigs** in a cool, dry place. Be careful not to lose the labels that identify them.

To avoid wrinkling the **leaves,** place them carefully between the pages of a large magazine. Put a heavy weight on top of the magazine. Be sure to write the name of each tree on the page where you insert the leaf. Keep the leaves in the press for at least two weeks to dry them sufficiently for mounting.

Leave dry **fruit,** such as that of the maple, ash, elm, and oak in their envelopes when you come in from the woods. Keep the envelopes in a cool, dry place. Before storing, shuck off the husks (outer covering) of hickory nuts, walnuts, and butternuts, leaving the hard-shelled seeds. Put evergreen cones near a source of heat to force them to open their scales. Shake vigorously to remove the winged seed; then store the seed in an envelope. Keep the empty cones as well as the seed for your collection. Mash fleshy fruit, such as osageorange, persimmon, and cherry. Wash out the seed and place it in an envelope.

MOUNTING YOUR COLLECTION

If possible, mount your collection in July or August so that you can exhibit it at the county fair. Or perhaps you will want to put your collection in the farm adviser's office where visitors from various parts of the county can see it.

Equipment

For mounting specimens, you will need the following equipment:

12 sheets of light cardboard, 8½ by 11½ inches.

Covers for the collection. You can use notebook covers with punched holes.

Tube of rubber cement for fastening specimens to mounting sheets.

Transparent (Scotch) tape for attaching leaves, twigs, and flat seed to cardboard.

Ribbon for binding covers and sheets together.

Ruler, pencil, pen, ink, knife or razor blade, scissors, and hacksaw.

How to Arrange Specimens on Cardboard Sheets

The photograph on page 16 shows a good way to mount specimens. When you are mounting large leaves, such as black walnut, you may need two sheets for the leaf alone.

The leader is showing a 4-H forester some of the "earmarks" that identify this tree as a white oak.

You can either put leaf and twig specimens of two trees on sheets that face each other, or use facing sheets for one tree. Before actually mounting your leaf, twig, and fruit, move them around on the sheet until you find their best positions. Be sure to leave enough space at the top for the title and at the bottom for the important commercial uses. Mark the upper, lower, and side limits of your specimens with a pencil so that when you mount them they will be in the same position.

You may also wish to make a sketch showing the uses of the wood, such as in building a house, barn, or other structure. For example, white oak could be used for sills in a house or as flooring in a hoghouse.

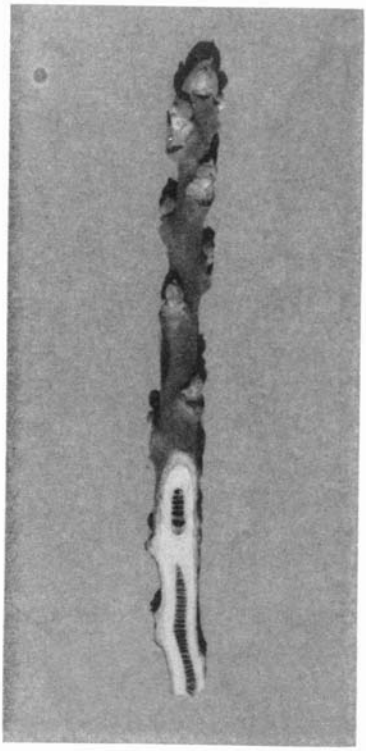
Leaves

Use narrow strips of Scotch or adhesive tape to fasten the leaves to the page. Be sure the tape sticks tightly. Use rubber cement if it loosens.

You can fasten evergreen needles by spreading a thin coat of rubber cement over a sheet of paper and placing the needles on the cement. Gently press the needles down until each one has come into contact with the cement; then transfer them to the cardboard sheets. Arrange pine needles in clusters of two to five needles, depending upon the species. For example, red pine has two needles in a cluster, and white pine has five. Select one cluster and cement it separately from the twig to show the number of needles in each cluster. Spread the needles apart in the cluster when you cement them.

Twigs

Select the end of the twig with the terminal buds. Be sure that the buds are not loose or broken. Cut the twigs a uniform length of about 5 inches. Make a slanting or beveled cut on one end to show the pith or central portion of the twig. The pith is usually softer than the wood surrounding it. For white oak, the shape of the pith in cross section is important. The pith of black walnut is honeycombed or chambered. Split an inch of the twig of black walnut to show this honeycombed structure. Two strips of tape should be enough to fasten the twig to the mounting sheet.



Black walnut twig cut lengthwise to show honeycombed or chambered pith.

Fruit

Use rubber cement for mounting fruit and seed. Put a weight on the specimen and leave it for one week. You may mount small fruit whole, just as it comes from the tree.

Cut such fruit as acorns, nuts, and cones in half and cement the flat side to the paper. Evergreen cones will cut easier if the scales are closed. Place the cones in a pan of water to close the scales, then cut the cones in half. Cement the winged seed of evergreens alongside the cone.

Lettering

You will find it easier to letter the sheets before you permanently mount your specimens. Light penciled guide lines should help you do a good job. Black India ink will make the letters permanent. Add the name of the tree and at least four commercial uses of the wood.

The summer key at the back of this manual is very helpful in identifying trees. Using a summer key, this 4-H Club member has discovered that the twig he is holding is from a white ash.

You can recognize coniferous and deciduous trees by their leaves and fruit. The boy is examining the needles and cone of a coniferous tree (red pine). The girl is holding the fruit of a deciduous tree (osageorange).

Assembling Your Collection

Arrange the sheets of your collection in the order in which the various species appear in "Forest Trees of Illinois — How to Know Them." Bind the cover and sheets together with ribbon. You will need to punch holes in the cardboard sheets to match the ones in the covers. And remember — neatness counts a great deal in mounting, lettering, and assembling the materials in your collection.

KNOWING AND FINDING WOODS

All of us use wood, the product of our forest trees, in one form or another. We may use it as pulp in paper bags and cardboard cartons, or we may cut it into boards of various sizes.

If you have never made a simple piece of furniture, or carved an object from wood, or nailed a crate, or built a tree house or a cabin — then you have missed something! Working on wood with a knife, a plane, a drill, a sanding block, and a sealer is a very satisfying experience.

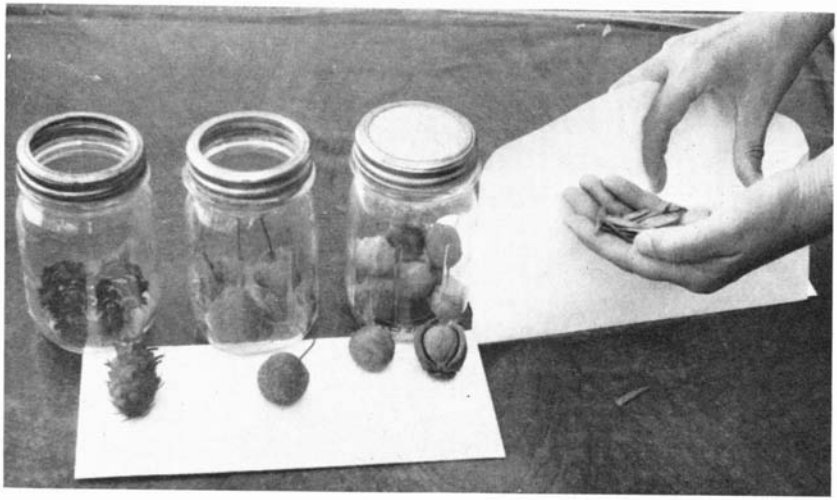
But before you start to work with wood, examine a few of the common woods and find out what properties each one has. Then look for samples of the kinds that you would like to have for your collection.

Where to Find Wood Samples

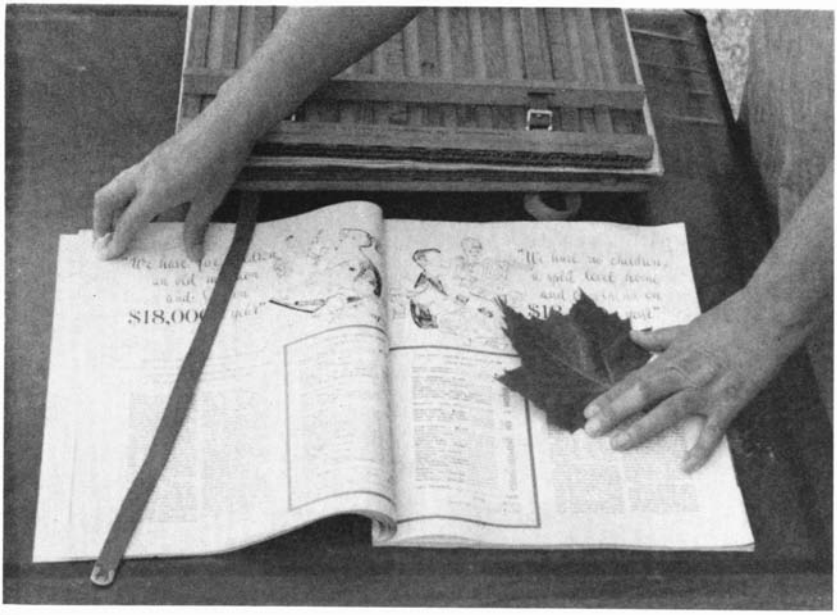
Local lumber yards are good places to find samples of wood. Most lumber yards stock the softwoods (wood from coniferous trees), such as Douglas-fir, western white pine, western spruce, redwood, and western red cedar. Mahogany from Africa, the Philippines, or Central and South America is often available in the form of both plywood and boards. Some yards also carry hardwoods (wood from deciduous trees like those found in Illinois woodlands), such as white oak, walnut, ash, and birch.

Local sawmills can also supply you with wood samples. Wood from sawmill yards is usually green and needs to be dried for several weeks. But be careful not to dry your samples too fast or they will check or crack.

Put the samples in a basement where it is somewhat humid but not so moist that the wood will decay instead of drying. Keep the samples there for three months.

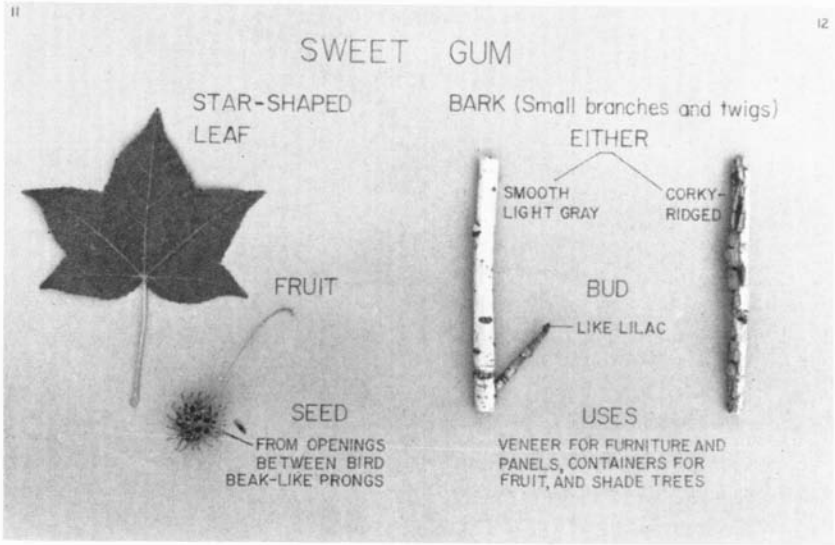


Proper storage of seed is important to prevent loss or damage. Some seeds should be stored in envelopes; others in fruit jars.



Dry the leaves for your collection between the pages of a magazine or in a leaf press like the one shown in background.

Well-mounted specimens on two sheets of a collection. Notice the variety of specimens shown.



This boy is planing a piece of black walnut for use as a sample in his collection.

Wood-working shops in high schools or planing mills are excellent sources of wood samples. This wood is almost certain to be dried (seasoned) and in good condition for mounting in a collection.

Wood industries offer a limited choice of wood samples. Examples of these industries are furniture factories, basket and container factories, pallet mills, and pulp mills.

Trees from farm woodlands at home or on a neighbor's property will furnish you with trunk sections or samples of native hardwood from smaller branches.

Forest plantations of pine that need thinning offer another source of wood samples. These plantations can be thinned when the trees reach post size (4 to 6 inches in diameter).

Collect two samples of each kind of wood. If one piece does not work well for your exhibit, you will have another that you can use.

GETTING YOUR WOOD EXHIBIT READY FOR COMPETITION

Standards to Meet in Preparing Your Exhibit

1. Wood samples cut from boards should be at least 6 inches long, 3 inches wide, and ½-inch thick when finished for mounting. Samples of cylindrical sections from limbs or sections of products should be of corresponding dimensions in length and width. (See opposite page.)

2. Each sample should have an identification card with the name of the wood on it. List at least 4 important uses for each kind of wood in your exhibit.

3. Fasten the samples to the display board with glue or screws.

Suggestions for Preparing Your Exhibit

1. Cut all wood samples to equal size.

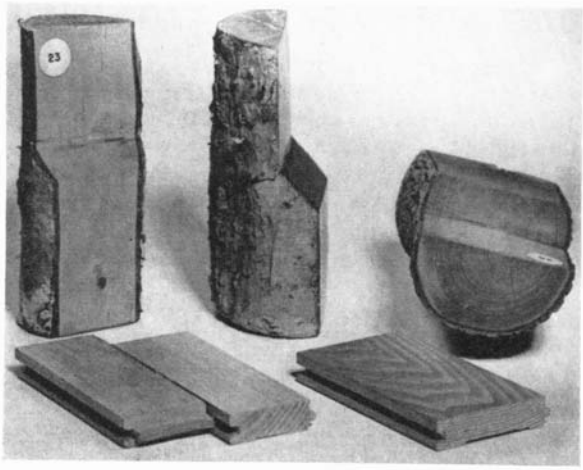
2. Cut samples square to make them look neat.

3. Sand boards with fine sandpaper.

4. Apply a sealing coat of a clear synthetic material, or use varnish or wax as a coating.

5. If you use limb material, be careful not to tear off the bark when cutting and sanding.

When you have completed your exhibit, you may want to hang it on the wall of your room until fair-time, as this boy is doing.



For your exhibit, you may want to use samples of wood "in the round" with the bark on, or wood products such as the pieces of flooring shown.

6. You may want to leave half of the cut surface uncoated to show the natural color of the wood.

7. Prepare label cards to identify the woods and indicate uses.

8. Lay out the samples on the mounting board with the labels in place and mark locations. Leave space for the title at top.

9. You can either screw or glue wood samples to the mounting board. If you use screws, drill two holes for screws for each sample.

10. Glue labels to mounting board.

11. Choose a title. Letter the title on the board or on paper or cardboard and fasten it to the top of the mounting board.

12. Put your name, address, and 4-H Club on the board.

SUGGESTIONS FOR DEMONSTRATIONS

While completing this 4-H Club unit, you may enjoy giving a demonstration. The following subjects are suitable for a club or county contest. You may have additional ideas for subjects. You can give these demonstrations either alone or with the help of another 4-H Club member.

1. Identifying a tree species with a key.

2. Identifying the species of a wood sample.

3. Mounting tree specimens for an exhibit (leaves, fruit, twig, bark, or wood).

4. Methods of preparing specimens and storing them for exhibits (use of magazine or leaf press, jars and envelopes for seed, seasoning wood samples to prevent checks).

YOUR LIST OF FOREST AND SHADE TREES OF ILLINOIS

Check each tree below that you can identify by leaf and twig. The natural range of a deciduous tree followed by (N) is northern Illinois and by (S) is southern Illinois. When neither of these letters appears after the tree name, the tree can either be found throughout the state or in more limited ranges in both the northern and southern parts.

Deciduous Group (lose their leaves in winter)

Ailanthus (Treeofheaven) ____
Ash, White ____
Aspen, Bigtooth (N) ____
Basswood (Linden) ____
Beech (S) ____
Birch, River ____
Boxelder ____
Buckeye, Ohio ____
Catalpa, Northern ____
Cherry, Black ____
Coffeetree, Kentucky ____
Cottonwood, Eastern ____
Dogwood, Flowering (S) ____
Elm, American ____
Elm, Slippery (Red) ____
Gum, Black (S) ____
Gum, Sweet (Red) (S) ____
Hackberry ____
Hawthorne (Thornapple) ____
Hickory, Bitternut ____
Hickory, Mockernut ____
Hickory, Pignut ____
Hickory, Shagbark ____
Hophornbeam (Ironwood) ____
Hornbeam (Bluebeech) ____
Locust, Black ____
Locust, Honey ____
Maple, Silver ____
Maple, Sugar ____
Mulberry, Red ____
Oak, Black ____
Oak, Blackjack ____
Oak, Bur ____
Oak, Chinquapin ____
Oak, Pin ____
Oak, Post (S) ____
Oak, Red ____
Oak, Shingle ____
Oak, Swamp White ____
Oak, White ____
Osageorange ____
Persimmon (S) ____
Redbud ____
Sassafras ____
Serviceberry ____
Sycamore ____
Tuliptree (Yellow-poplar) (S) ____
Walnut, Black ____
Willow ____

Coniferous Group (Evergreen except Bald Cypress and European Larch.)

The only trees in this group native to Illinois are Arborvitae, Eastern Red Cedar, Bald Cypress, Shortleaf Pine, and White Pine.

Arborvitae (Northern White-cedar) (N) ____
Cedar, Eastern Red ____
Cypress, Bald (S) ____
Douglas-fir (N) ____
Hemlock (N) ____
Larch, European ____
Pine, Austrian ____
Pine, Jack ____
Pine, Loblolly (S) ____
Pine, Pitch ____
Pine, Ponderosa ____
Pine, Red ____
Pine, Scotch ____
Pine, Shortleaf (S) ____
Pine, Virginia ____
Pine, White ____
Spruce, Blue ____
Spruce, Norway ____
Spruce, White (N) ____

GUIDE TO TIME OF FLOWERING AND SEED RIPENING OF COMMON ILLINOIS FOREST AND SHADE TREES

Deciduous Group	Flowering Period	Seed Ripe
Ash, White	April–May	August-September
Aspen	April–May	May–June
Basswood	June	August–September
Beech	April–May	September–October
Birch, River	Late March–April	May–June
Boxelder	March–April	September–October
Buckeye	March–April	September–Mid-October
Cherry, Black	April–May	July–August
Cottonwood	April–May	May–June
Elms, American and Slippery	March–April	April–May
Gums, Black and Sweet	March–April	September–October
Hackberry	April–May	September–October
Hickories, Bitternut, Mockernut, and Pignut	April–May	September–October
Hickory, Shagbark	April–June	September–November
Locusts, Black and Honey	May–June	September–October
Maple, Silver	February–April	April–Mid-June
Maple, Sugar	March–May	Mid-September–October
Oaks, Black, Pin, Red, and White	April–May	September–October
Oak, Bur	April–May	August–September
Oak, Post	March–May	September–November
Osageorange	April–June	September–October
Persimmon	April–May	September–November
Sassafras	March–April	August–September
Sycamore	May	September–October
Tuliptree	April–June	September–November
Walnut, Black	May–June	September–October
Willow, several kinds	March–May	April–June
Coniferous (Evergreen except Bald Cypress)		
Arborvitae	April–May	August–September
Bald Cypress	March–April	Late September–November
Cedar, Red	Mid-March–Mid-May	Mid-September–Mid-November
Pine, Jack	May	September
Pines, Loblolly and Shortleaf	March–April	October–November
Pine, Red	April–June	September–October
Pine, Scotch	May–June	September–October
Pine, White	April–June	August–September
Spruce, Blue	April–May	Late September–October
Spruce, Norway	May–June	September–October
Spruce, White	May	August–September

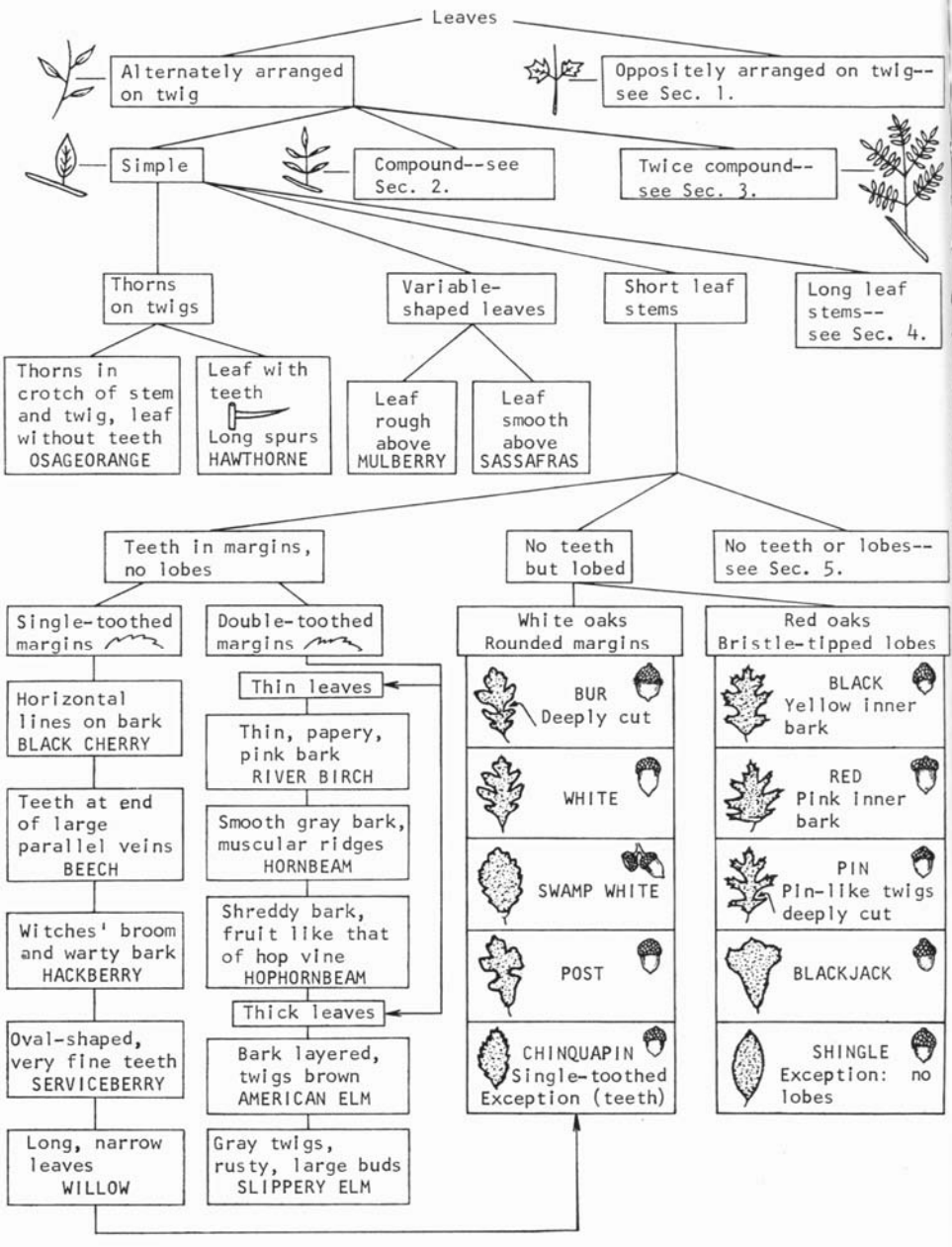
CHARACTERISTICS OF 25 COMMON FOREST TREES OF ILLINOIS

Species	Leaves	Twigs	Fruit	Bark
White Ash	Compound, usually with 7 leaflets	Branches opposite on twig, coarse	Winged, shaped like canoe paddle	Older trunks often have diamond-shaped figure
Boxelder	Compound, 3 to 5 leaflets	Green twigs, buds short-stalked and white, oppositely branched	Winged key	Green to purple on small branches; grayish and light brown on older trunks
Red Cedar	Evergreen 2 types: awl and scale-like	Outer twigs covered with 4-ranked scales on leaves	¼-inch pale blue berry	Reddish-brown, thin, shreds easily
Black Cherry	Shiny upper surface	Bitter taste	⅜-inch cherry	Cross or horizontal marks
Cottonwood	Triangular-shaped, flat stem	Shiny resinous buds with stout angular wings	Cotton-like in spring	Young tree, smooth, yellow-green; old tree, rough, flat ridges
American Elm	Double saw-toothed edge, parallel veins, smooth above	Terminal bud lacking, twig zigzagged	Wafer-like with notch; ripe in spring	Alternate cream and brown layers; vase-shaped crown
Slippery (Red) Elm	Lower surface very rough	Buds rust-colored and hairy	Wafer with seed in center, *no* notch	Slick inner bark
Hackberry	Single-tooth edge, lopsided shape	Often bushy (witches' broom)	Hard berry	Warty, gray
Bitternut Hickory	Compound, 7 to 11 leaflets	Buds sulphur-yellow	Nut bitter, 1-inch, rounded	Granite-gray, smoothest of hickories
Shagbark Hickory	Compound, usually with 5 leaflets	Terminal bud very large (½- to ¾-inch)	Nut with 4-ribbed husk	Breaks loose in wide strips
Hophornbeam	Like elm but thinner	Dark reddish-brown bark	Bladder sack, hop-like	Curls in narrow, scaly plates with free ends
Black Locust	Compound	Thorns in pairs, short length	Pod about 3 to 4 inches long	Short thorns on trunk

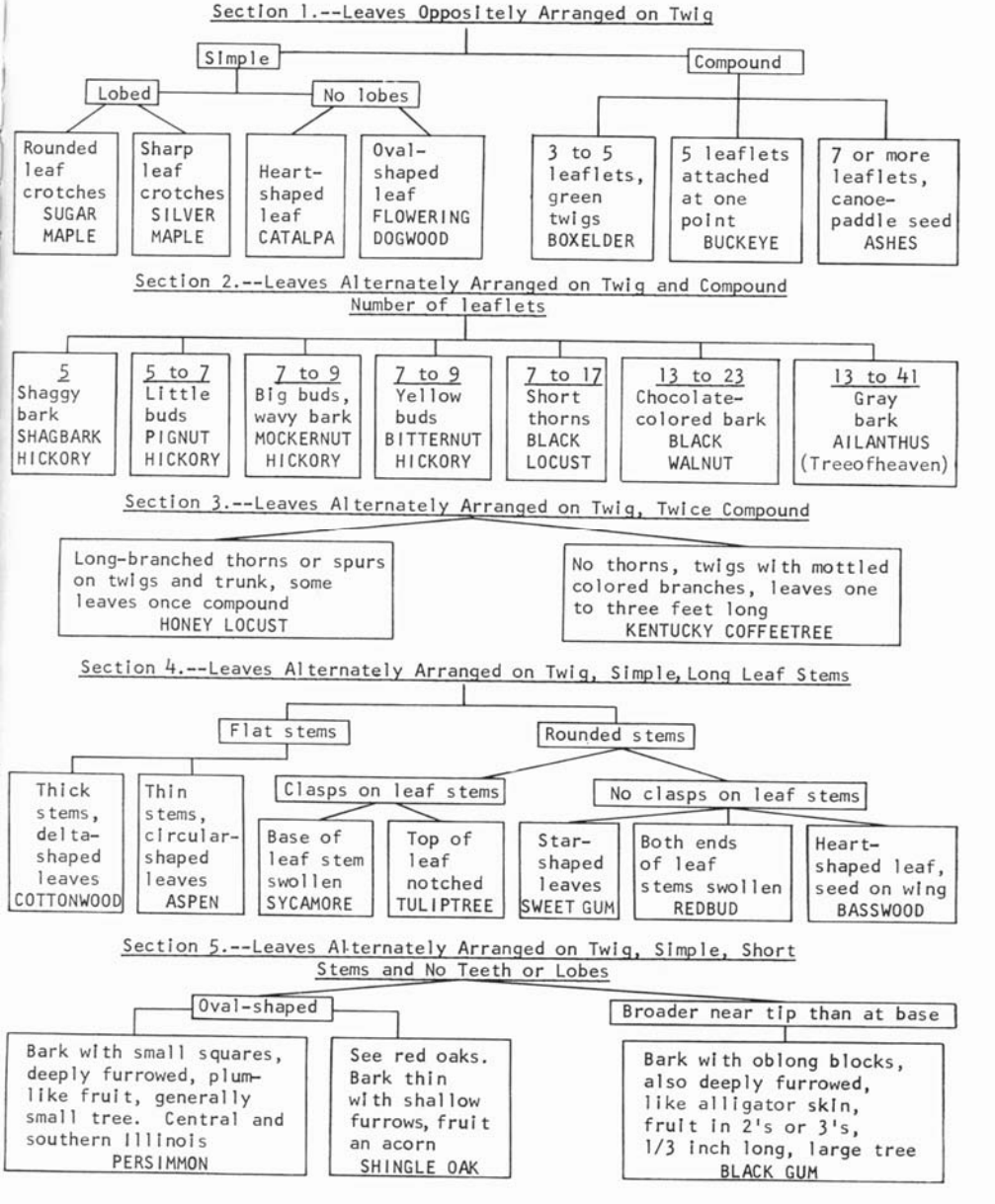
CHARACTERISTICS OF 25 COMMON FOREST TREES OF ILLINOIS (Continued)

Species	Leaves	Twigs	Fruit	Bark
Honey Locust	Double compound leaflets, short (1 inch or less)	Long thorns (spurs) on twigs and trunk	Pods from 7 to 18 inches long	Black with short lines, like cherry
Silver Maple	V-shaped crotches in leaf	Oppositely branched with fine twigs	Dougle-winged key, ripens in spring	Silver gray to darker gray
Sugar Maple	Crotches curved at base between lobes (divisions)	Sharp-pointed brown buds, oppositely branched	Key, ripens in fall	Dark grayish, irregularly plated
Red Mulberry	Three shapes: unlobed, mitten, 3-lobed	Sap from twig, milky	Like a blackberry	Yellowish brown, thin, peels to flakes
Black Oak	Bristle-tipped lobes	Smooth surface	Acorn with deep cup covering half	Yellow inner bark
Bur Oak	Center deeply cut, widest at top	Corky ridges	Acorn with hairy fringed cup	Vertically ridged with deep furrows
Pin Oak	Lobes bristle-tipped and very deeply cut	Lower branches droop, die, leaving stubs (pins)	Acorn, ½-inch, saucer-like cup	Similar to red oak; older trunks close scales
Red Oak	Similar to black oak	Winter buds, small light-reddish brown	Acorn, 1-inch, saucer cup, beret-like	Smoother than black oak, pink inner bark
White Oak	Finger-like lobes with rounded ends	Pith, star-shaped (cross-cut twig)	Acorn with shallow cup	Flaky, ridged, ashy gray
Osageorange	Glossy green above, edges without teeth	Spines unbranched	Green, rough ball like orange (hedgeapple)	Tinged with yellow and black
Sycamore	Large, simple leaf with stem swollen at base	Buds covered with leaf stems	Ball-shaped 1-inch, brown	Olive green and white blotches
Black Walnut	Compound, 13 to 23 leaflets	Pith honeycombed (chambered)	Nut with round husk	Inner bark, lemon yellow; outer, chocolate
Black Willow	Long, narrow, with very short stem	Fine and slender; bud has only one scale	Cotton-like seed carried by wind	Broad flat ridges, shaggy on older trunks

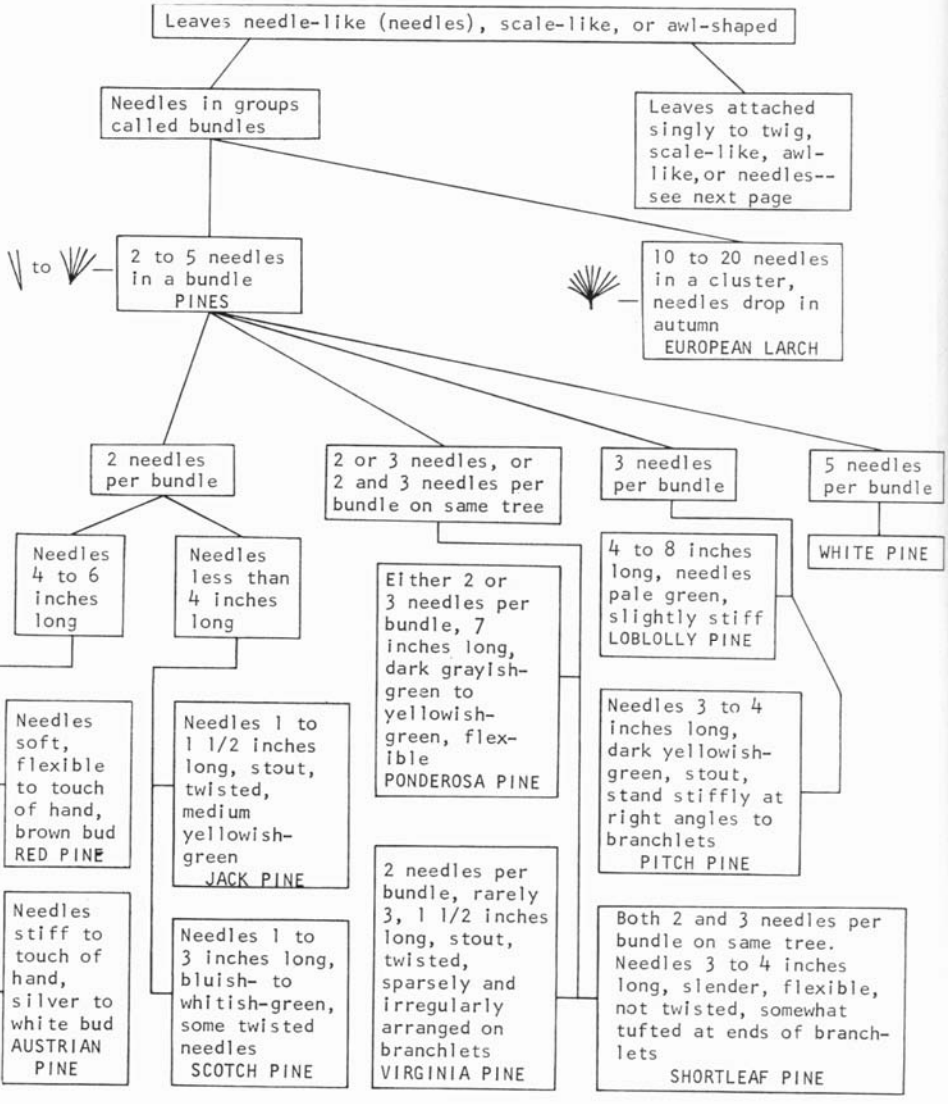
Summer Key for Identifying Broadleaved Forest Trees of Illinois



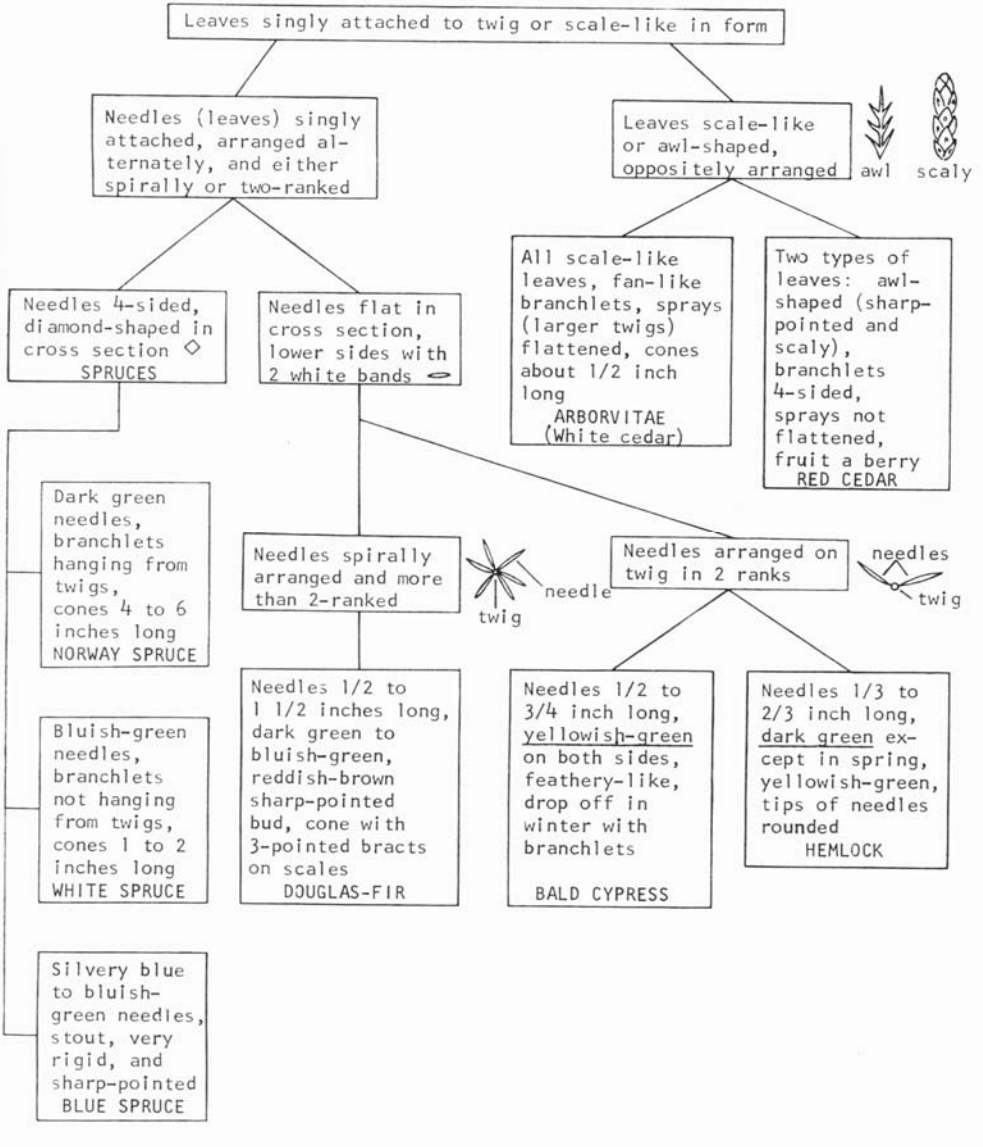
Summer Key for Broadleaved Trees (continued)



Key for Identifying Coniferous Forest Trees Planted in Illinois



Key for Coniferous Trees (continued)



PUBLICATIONS

TO BE USED WITH THIS MANUAL

Forest Trees of Illinois, Division of Forestry, Illinois State Department of Conservation, Springfield, 1955 (free).

FOR ADDITIONAL INFORMATION

A Summer Key to Some Common Native and Introduced Trees of Illinois, Department of Forestry, University of Illinois (Mimeo, free).

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12M—12-60—72349